

[What is Claimed is:]

1. A communications setting method for a communications network system for performing data communications among a plurality of devices through power line, wherein

a house code notification including a house code to be uniquely set for the communications network system is transmitted from a first device in the communications network system to a second device in the communications network system more than once in a first predetermined time period.

2. The communications setting method according to claim 1, wherein

the house code notification includes identification information which can be received by a device whose house code has not been set.

3. The communications setting method according to claim 1, wherein

the second device obtains the house code when receiving the house code notification successively at predetermined times in a second predetermined time period.

4. The communications setting method according to claim 3, wherein

upon receipt of house code notifications including different house codes in the second predetermined time period, the second device discards the house codes.

10075570.021302

5. The communications setting method according to claim 3, wherein

after holding the house code, the second device transmits an address setting request including a terminal identification code uniquely identifying the second device to the first device.

6. The communications setting method according to claim 5, wherein

upon receipt of the address setting request, the first device transmits a terminal address of the second device together with the terminal identification code to the second device.

7. The communications setting method according to claim 1, wherein

the first device starts transmitting the house code notification by a user operation.

8. The communications setting method according to claim 1, wherein

the second device enters a waiting state for receiving a house code notification if the house code is not set when power is turned on.

9. A communications network system in which data communications is performed among a plurality of devices

10075570-021302

including a first device and a second device through power line, wherein

the first device comprises

house code storage portion storing a house code to be uniquely set for the communications network system; and

transmission portion transmitting a house code notification including the house code more than once in a first predetermined time period to the second device; and

the second device comprises

reception portion receiving the house code notification transmitted from the first device; and

house code obtaining portion obtaining the house code when receiving the house code notification successively at predetermined times in a second predetermined time period.

10. A device connected to a communications network system which performs data communications through power line, wherein

a house code notification including a house code to be uniquely set for the communications network system is transmitted more than once in a predetermined time period to a second device connected to the communications network system.

11. The device according to claim 10, wherein

the house code notification includes identification information which can be received by a device whose house code has not been set.

10075570.021302

12. The device according to claim 10, wherein

when an address setting request including terminal identification code for unique identification of the second device is received, a terminal address of the second device is transmitted to the second device together with the terminal identification code.

13. The device according to claim 10, wherein

transmitting the house code notification is started by a user operation.

14. A device connected to a communications network which performs data communications through power line, wherein

a house code notification including a house code to be uniquely set for the communications network system is received from another device connected to the communications network system.

15. The device according to claim 14, wherein

the house code is obtained when the house code notification is received successively at predetermined times in a predetermined time period.

16. The device according to claim 15, wherein

when house code notifications including different house codes are received in the predetermined time period, the house codes are discarded.

17. The device according to claim 15, wherein

1075570-021302

after holding the house code, an address setting request including a terminal identification code for unique identification of the device is transmitted to said another device.

18. The device according to claim 14, wherein

if a house code is not set when power is turned on, the device enters a waiting state for receiving a house code notification.

19. A method of transferring a master function of a device connected to a communications network system which performs data communications among a plurality of devices through power line, wherein

the master function is to set a house code or a terminal address to another device;

a first device having the master function and an address table holding terminal addresses which can be assigned to other devices transmits the address table to a second device when the first device receives from the second device an address table transmission request indicating a transmission request of the address table,

upon receipt of the address table, the second device retrieves from the address table an unused address which can be assigned as a terminal address to the first device, and transmits to the first device a request to change a terminal

10075570-021302

address into the unused address and a request to invalidate the master function; and

the second device enables its own master function when the first device changes its own terminal address into the unused address, and invalidates the master function.

20. The method of transferring a master function of a device according to claim 19, wherein

the second device transmits to the first device an address table transmission request indicating a transmission request of the address table by a user operation.

21. A communications network system which performs data communications through power line among a plurality of devices including a first device and a second device having a terminal address and a master function of setting a house code or a terminal address, wherein

the first device comprises means for holding an address table which holds terminal addresses assignable to other devices, means for receiving an address table transmission request to transmit the address table, and means for transmitting the address table;

the second device comprises means for transmitting the address table transmission request, means for receiving the address table, means for retrieving from the address table received by means for receiving an unused address which can

10075570-021302

be assigned as a terminal address to another device, and means for transmitting a request to change the terminal address into the unused address and a request to invalidate the master function; and

the second device enables its own master function when the first device changes the terminal address into the unused address and invalidates the master function.

22. A device which has a master function, and is connected to a communications network system which performs data communications through power line, wherein

the master function is to set a house code or a terminal address to another device and

the device comprises means for storing an address table holding terminal addresses assignable to other devices, means for receiving an address table transmission request to transmit the address table, and means for transmitting the address table at the address table transmission request.

23. The device according to claim 22, wherein

when a terminal address, a request to change the terminal address, and a request to invalidate the master function are received, the terminal address of the device is changed to the terminal address received, and the master function is invalidated.

24. The device according to claim 23, wherein

10075570.021302

an address setting completion notification indicating that the address has been changed into the terminal address received, and that the master function has been invalidated is transmitted.

25. The device according to claim 22, wherein

the address table includes address assignment information indicating whether or not a terminal address has been assigned.

26. A device which has a master function and is connected to a communications network system, wherein

the master function is to set a house code or a terminal address to another device; and the device comprises:

means for obtaining an address table holding terminal addresses assignable to other devices; and

means for extracting a terminal address assignable to another device from the address table, and transmitting the terminal address, a request to change into the terminal address, and a request to invalidate a master function of another device having the master function.

27. The device according to claim 26, wherein

the address table further includes address assignment information indicating whether or not a terminal address has been assigned to said another device.

28. The device according to claim 27, wherein

10075570.021302

after receiving the address setting completion notification, the master function of the device is enabled.

29. A device connected to a communications network system which performs data communications among a plurality of devices through power line, wherein

an address table including terminal addresses of other devices and address assignment information indicating whether or not the terminal addresses have been assigned is held, and a reply request is periodically transmitted to other devices when a number of pieces of the address assignment information is equal to larger than a predetermined value.

30. The device according to claim 29, wherein

the address table records a number of times of no reply in response to the reply request for each assigned terminal address and

the address assignment information about a terminal address for which the number of times of no-reply exceeds a predetermined value is changed from 'assigned' to 'unassigned'.

31. A program of causing a computer to realize a function of transmitting a house code notification including a house code more than once in a predetermined time period.

32. A program of causing a computer to realize a function of obtaining a house code when a house code notification

1075570-021302

including the house code is received successively at predetermined times in a predetermined time period.

33. A computer processable medium bearing the program according to claim 31.

34. A computer processable medium bearing the program according to claim 32.

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